

[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [66 FR 16116 3/23/2001]

[Docket No. 2001-NM-19-AD; Amendment 39-12155; AD 2001-06-08]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 737-600, -700, and -800 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; request for comments.

SUMMARY: This amendment adopts a new airworthiness directive (AD) that is applicable to certain Boeing Model 737-600, -700, and -800 series airplanes. This action requires repetitive inspections of certain elevator hinge plates, and corrective action, if necessary. This action also provides for an optional replacement of the elevator hinge plates with new, improved hinge plates, which would end the repetitive inspections. This action is necessary to detect and correct fatigue cracking of the elevator hinge plates, which could lead to the loss of the attachment of the elevator to the horizontal stabilizer, and consequent reduced controllability of the airplane. This action is intended to address the identified unsafe condition.

DATES: Effective April 9, 2001.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of April 9, 2001.

Comments for inclusion in the Rules Docket must be received on or before May 22, 2001.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 2001-NM-19-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056. Comments may be inspected at this location between 9:00 a.m. and 3:00 p.m., Monday through Friday, except Federal holidays. Comments may be submitted via fax to (425) 227-1232. Comments may also be sent via the Internet using the following address: 9-anm-iarcomment@faa.gov. Comments sent via fax or the Internet must contain "Docket No. 2001-NM-19-AD" in the subject line and need not be submitted in triplicate. Comments sent via the Internet as attached electronic files must be formatted in Microsoft Word 97 for Windows or ASCII text.

The service information referenced in this AD may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. This information may be examined at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Nancy Marsh, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2028; fax (425) 227-1181.

SUPPLEMENTARY INFORMATION: The FAA has received a report that, during flight testing of Boeing Model 737-600, -700, and -800 series airplanes, the elevator hinge plates at elevator hinges 3, 4, 5, 6, 7, and 8 experienced higher-than-expected loads due to buffeting by the spoiler. The higher loads reduce the service life of the elevator hinge plates. Reduced service life of the elevator hinge plates could lead to fatigue cracking of the elevator hinge plates in service. Such cracking could lead

to the loss of the attachment of the elevator to the horizontal stabilizer, and consequent reduced controllability of the airplane.

Explanation of Relevant Service Information

The FAA has reviewed and approved Boeing Service Bulletin 737-55-1067, dated October 19, 2000, which describes instructions for the following:

- Repetitive detailed visual inspections of the elevator hinge plate lugs (three locations) at elevator hinges 3, 5, 6, 7, and 8.
- Repetitive high frequency eddy current (HFEC) and detailed visual inspections of the hinge plate at elevator hinge 4. (Analysis has shown that the hinge plate at elevator hinge 4 is most critical; therefore, in addition to the detailed visual inspection, an HFEC inspection is necessary for elevator hinge 4.)
- Corrective actions, which entail replacement of the hinge plate with a new part, if any crack or unusual wear is found on a hinge plate. (For the purposes of this AD, unusual wear is defined as elongated holes, loose or missing nuts or bolts, or missing primer or finish.)
- Replacement of the elevator hinge plates at hinges 3, 4, 5, 6, 7, and 8, with new, improved hinge plates, and modification of the elevator upper skin, the upper and lower hinge covers, and the upper and lower closure panels, as applicable. Doing these actions eliminates the need to do the repetitive inspections.

Explanation of the Requirements of the Rule

Since an unsafe condition has been identified that is likely to exist or develop on other airplanes of the same type design, this AD is being issued to detect and correct fatigue cracking of the elevator hinge plates, which could lead to the loss of the attachment of the elevator to the horizontal stabilizer, and consequent reduced controllability of the airplane. This AD requires accomplishment of the actions specified in the service bulletin described previously, except as discussed below.

Difference Between This AD and the Service Bulletin

Operators should note that the service bulletin recommends doing the inspections prior to the accumulation of 7,000 total flight cycles on the airplane. The FAA finds that such a compliance time could put some airplanes out of compliance as of the effective date of this AD if the airplane already has accumulated more than 7,000 total flight cycles before the effective date of the AD. Therefore, this AD provides a grace period of 90 days after the effective date of this AD for the inspection for airplanes that are close to or over the threshold of 7,000 total flight cycles.

Operators also should note that, although the service bulletin specifies to contact Boeing for wear limits during replacement of elevator hinge plates, this AD requires that such wear limits be obtained from the Manager, Seattle Aircraft Certification Office (ACO), FAA, or a Boeing Company Designated Engineering Representative who has been authorized by the Manager, Seattle ACO, to make such findings.

Interim Action

This is considered to be interim action. The service bulletin recommends the replacement of elevator hinge plates prior to the accumulation of 15,000 total flight cycles, or within 5 years since date of delivery of the airplane, whichever occurs first. This AD provides for the replacement as optional. The FAA is currently considering requiring the replacement of the elevator hinge plates with new parts, which is described in the service bulletin and which would constitute terminating action for the repetitive inspections required by this AD action. However, the planned compliance time for the replacement is sufficiently long so that notice and opportunity for prior public comment will be practicable.

Determination of Rule's Effective Date

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and opportunity for prior public comment hereon are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

Comments Invited

Although this action is in the form of a final rule that involves requirements affecting flight safety and, thus, was not preceded by notice and an opportunity for public comment, comments are

invited on this rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire. Communications shall identify the Rules Docket number and be submitted in triplicate to the address specified under the caption "ADDRESSES." All communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Factual information that supports the commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.

Submit comments using the following format:

- Organize comments issue-by-issue. For example, discuss a request to change the compliance time and a request to change the service bulletin reference as two separate issues.
- For each issue, state what specific change to the AD is being requested.
- Include justification (e.g., reasons or data) for each request.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report that summarizes each FAA-public contact concerned with the substance of this AD will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this rule must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 2001-NM-19-AD." The postcard will be date stamped and returned to the commenter.

Regulatory Impact

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

The FAA has determined that this regulation is an emergency regulation that must be issued immediately to correct an unsafe condition in aircraft, and that it is not a "significant regulatory action" under Executive Order 12866. It has been determined further that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket. A copy of it, if filed, may be obtained from the Rules Docket at the location provided under the caption "ADDRESSES."

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding the following new airworthiness directive:

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "av-info.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2001-06-08 BOEING: Amendment 39-12155. Docket 2001-NM-19-AD.

Applicability: Model 737-600, -700, and -800 series airplanes; line numbers 1 through 84 inclusive; certificated in any category.

Note 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To detect and correct cracking of the elevator hinge plates, which could lead to the loss of the attachment of the elevator to the horizontal stabilizer, and consequent reduced controllability of the airplane, accomplish the following:

Inspections and Corrective Actions

(a) Prior to the accumulation of 7,000 total flight cycles or within 90 days after the effective date of this AD, whichever occurs later, perform high frequency eddy current and detailed visual inspections of the hinge plate at elevator hinge 4, and a detailed visual inspection of the elevator hinge plate lugs (three locations) at elevator hinges 3, 5, 6, 7, and 8. Do these inspections per Part I of the Accomplishment Instructions of Boeing Service Bulletin 737-55-1067, dated October 19, 2000. Repeat the inspections thereafter no later than every 4,000 flight cycles, per the service bulletin, until paragraph (b) of this AD has been accomplished. If any cracking or unusual wear (i.e., elongated holes, loose or missing nuts or bolts, or missing primer or finish) is found during any inspection per this paragraph, before further flight, replace the affected hinge plate with a new, improved hinge plate, and modify the elevator upper skin, the upper and lower hinge covers, and the upper and lower closure panels, as applicable, per the service bulletin, except as provided by paragraph (c) of this AD. Such replacement and modification ends the repetitive inspections for the replaced hinge plate.

Note 2: For the purposes of this AD, a detailed visual inspection is defined as: "An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required."

Optional Replacement of Hinge Plates

(b) Replacement of the elevator hinge plates at hinges 3, 4, 5, 6, 7, and 8, with new, improved hinge plates; including modification of the elevator upper skin, the upper and lower hinge covers, and the upper and lower closure panels, as applicable; per Part II of the Accomplishment Instructions of Boeing Service Bulletin 737-55-1067, dated October 19, 2000, except as provided by paragraph (c) of this AD; ends the repetitive inspections required by this AD.

Exception to Service Bulletin Instructions: Wear Limits

(c) During the replacement of elevator hinge plates per paragraph (a) or (b) of this AD, where Boeing Service Bulletin 737-55-1067, dated October 19, 2000, specifies to contact Boeing for wear limits, before further flight, contact the Manager, Seattle Aircraft Certification Office (ACO), FAA, or a Boeing Company Designated Engineering Representative who has been authorized by the Manager, Seattle ACO, to make such findings. For wear limits to be approved by the Manager, Seattle ACO, as required by this paragraph, the Manager's approval letter must specifically reference this AD.

Alternative Methods of Compliance

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle ACO. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

Note 3: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(e) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(f) Except as provided by paragraph (c) of this AD, the actions shall be done in accordance with Boeing Service Bulletin 737-55-1067, dated October 19, 2000. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

Effective Date

(g) This amendment becomes effective on April 9, 2001.

FOR FURTHER INFORMATION CONTACT: Nancy Marsh, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2028; fax (425) 227-1181.

Issued in Renton, Washington, on March 15, 2001.

Donald L. Riggin, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.